

(Practitioner's Docket No. IN-5554/BC1-0027)

REMARKS**1. Objection to Applicants' Amendment of September 20, 2005**

Objection has been made to Applicants' amendment of September 20, 2005 because of poor fax quality.

The Undersigned regrets the poor transmission quality and notes that a darker copy of the Amendment of September 20, 2005 has been attached hereto.

Reconsideration and removal of the objection is respectfully requested.

2. Rejection of claims 30 and 34 under 35 U.S.C. §112, second paragraph.

Claims 30 and 34 have been rejected as being Indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. In particular, it is the PTO's position that,

...with respect to claim 30, the requirements that the composition be both "curable" and "crosslinked" are contradictory. With respect to the structures of claim 34, it is unclear how to reconcile the requirements that the compositions are both "curable" and in the claimed form. For example, it is unclear what constitutes a curable molding, fiber or film.

Office Action of December 5, 2005, page 2.

Applicants appreciate the detailed rejection but must respectfully disagree with regards to amended claims 30 and 34.

Claim 30 has been amended to delete "crosslinked microparticles". Claim 34 has been amended to recite the embodiment wherein the composition is a coating. It is respectfully submitted that the inventions of amended claims 30 and 34 are consistent with the terms 'curable composition' and 'curable reaction product' of independent claims 21 and 42.

Reconsideration and removal of the rejection is respectfully requested.

(Practitioner's Docket No. IN-5554/BC1-0027)

3. **Rejection of claims 21, 23, 25-37, 42 and 43 under 35 U.S.C. 112, first paragraph.**

Claims 21, 23, 25-37, 42 and 43 have been rejected for failing to comply with the written description requirement. It is the PTO's position that

...the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Office Action of December 5, 2006, page 2.

Applicants appreciate the detailed basis of rejection but must respectfully disagree.

To satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, i.e., what is claimed. *See, e.g., In re Wertheim*, 191 U.S.P.Q. 90, 96 (C.C.P.A. 1976). The function of the written description requirement is to ensure that the inventor had possession, as of the filing date of the application relied upon, of the specific subject matter later claimed by him; to comply with the description requirement, it is not necessary that the application describe the claimed invention in *ipsis verbis*; all that is required is that it reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. *In re Edwards*, 568 F.2d 1349, 1351-52, 196 U.S.P.Q. 465, 467 (C.C.P.A. 1978).

Applicants' Specification on page 18, lines 16-29 expressly teaches that in one embodiment, 'the inventive oligomers and polymers', i.e., the curable reaction product, will contain functional groups which undergo crosslinking reactions with complementary functional groups. The complementary functional groups can be present in the curable reaction product or in a separate compound. Thus, the inventive oligomers and polymers can be "self-crosslinking" or "externally crosslinking".

(Practitioner's Docket No. IN-5554/BC1-0027)

Applicants' Specification clearly sets forth the various different reactive functional pairs that result in a crosslinking reaction, whether self or external, in the presence of one or more of thermal energy and/or actinic radiation. See *Specification, pages 19-20*.

Page 23, lines 1-11 of Applicants' Specification particularly disclose that coating comprising the inventive oligomers and polymers will be externally crosslinking and may be cured with one or more of thermal energy and/or actinic radiation.

The mechanics of curing with thermal energy and/or actinic radiation are discussed on pages 41, line 11 through page 44, line 8 of the Specification.

As a result, it is respectfully submitted that those of skill in the art understand that the term 'curable composition' refers to a system that is cured by either self-crosslinking or external crosslinking that occurs in the presence of thermal energy and/or actinic radiation. Similarly, those of skill in the art understand that the term 'curable reaction product' refers to a component of a curable system that participates in either self-crosslinking or external crosslinking reactions that are triggered and maintained by thermal energy and/or actinic radiation.

Thus, the detailed description in the Specification satisfies the written description requirements of 35 U.S.C. 112, 2nd paragraph. As noted above, it is not required that the application describe the claimed invention in *ipsis verbis*; all that is required is that it reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. This standard has been satisfied by the disclosures of Applicants' Specification.

Reconsideration and removal of the rejection is respectfully requested.

4. **Rejection of claims 21, 23, 25-37, 42, and 43 under 35 U.S.C. 112, first paragraph as failing to comply with the enablement requirement.**

The pending claims have been rejected for lack of enablement. The PTO states:

(Practitioner's Docket No. IN-5554/BC1-0027)

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants appreciate the detailed basis of rejection but must respectfully disagree.

To begin with, the first paragraph of Section 112 requires nothing more than objective enablement. *In re Marzocchi* 169 U.S.P.Q. 367 (C.C.P.A. 1971). The C.C.P.A. pointed out that "[n]ot every last detail [of an invention need] be described [in a patent specification], else patent specifications would turn into production specifications, which they were never intended to be." *In re Gay*, 135 U.S.P.Q. 311, 316 (C.C.P.A. 1962). Indeed, a specification need not describe — and best omits— that which is well-known in the art. *In re Buchner*, 18 U.S.P.Q.2d 1331, 1332 (Fed. Cir. 1991). The Federal Circuit has noted that "[t]he scope of the claims must be less than or equal to the scope of the enablement. The scope of enablement, in turn, is that which is disclosed in the specification *plus* the scope of what would be known to one of ordinary skill in the art without undue experimentation. *National Recovery Technologies, Inc. v. Magnetic Separation Systems, Inc.* 49 U.S.P.Q.2d 1671 (Fed. Cir. 1999) (emphasis added).

A patent application is presumptively enabled when filed. "[A] specification... must be taken as in compliance with the enablement requirement of the first paragraph of §112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support." *In re Marzocchi*, 169 U.S.P.Q. 367 (C.C.P.A. 1971).

Thus, the PTO has the burden of giving reasons, supported by the record as a whole, as to why the specification as a whole is not enabling, e.g., entails undue experimentation. *In re Morehouse* 192 U.S.P.Q. 29 (CCPA 1976).

The Federal Circuit identified eight factors for use in determining whether a disclosure is sufficient to enable one of ordinary skill in the art to practice a claimed invention throughout its scope without having to engage in undue

(Practitioner's Docket No. IN-5554/BC1-0027)

experimentation: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. *In re Wands*, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988).

The importance of these factors is reflected in the PTO's own enablement teaching materials which state that:

...[i]t is improper to conclude that a disclosure is not enabling based on an analysis of only one of the [*Wands*] factors while ignoring one or more of the others. The examiner's analysis must consider all the evidence related to each of these factors, and any conclusion of non-enablement must be based on the evidence as a whole.

35 U.S.C. §112 First Paragraph Enablement Training Manual at 8.

Applicants must respectfully submit that the instant rejection is predicated upon an improper application of the *Wands* factors and that the PTO has failed to meet its burden of providing a prima facie case.

In this case, Applicants' Specification teaches one of skill in the art how to make and use the disclosed curable reaction products and curable compositions comprising such curable reaction products. In particular, the working examples on pages 45–49 disclose the preparation and use of a curable composition comprising the disclosed curable reaction products. This level of enabling disclosure is equivalent to that normally provided to those of skill in this art and is sufficient to satisfy the requirements of 35 U.S.C. 112, 1st paragraph.

No reasons have been provided to support the PTO's conclusion that undue experimentation is required. That is, the PTO has failed to indicate where or why Applicants' Specification is nonenabling.

(Practitioner's Docket No. IN-5554/BC1-0027)

Accordingly, the PTO is respectfully requested to reconsider and remove the instant rejection or to provide a more detailed basis of rejection.

5. Rejection of claims 21, 27-31, and 33-37 under 35 U.S.C. 102(a) as being anticipated by Ott et al., WO 00/15725, hereafter "Ott" or "725".

The rejection of the pending claims as anticipated by Ott has been maintained and made final.

The Undersigned notes that Applicants' foreign priority date renders the instant rejection moot. The PTO's acknowledgement of the receipt of the certified copies of the priority documents is appreciated.

A copy of the translation of the certified priority document is being submitted under separate cover per MPEP 201.15 and 37 CFR 1.55 (a) (4). It is expected that upon the filing of the translation, Applicants will be entitled to rely upon the priority date to overcome the cited reference. Applicants' regret the inadvertent delay in making this submission.

6. Rejection of claims 21, 23, 25-37, 42 and 42 under 35 U.S.C. 102(b) as being anticipated by Paulus et al., DE19826715, hereafter "Paulus" or "715".

The rejection of the pending claims as anticipated by the '715 reference has been maintained and made final. The PTO states:

"The reference discloses coating compositions derived from 2,4-diethyloctane-1, 5-diol. See abstract. Despite applicants' arguments, the abstract clearly discloses the curing of a polymerizable composition comprising the compound derived from 2,4-diethyloctane-1,5-diol, and the position is taken that the resulting polymer satisfies the "two or more monomer units" limitation. Despite applicants' remarks, the reference allows for polymerizing the argued diethyloctanediol derivative; therefore, the resulting polymer contains the argued monomer units."

(Office Action of 6/20/05, page 4)

(Practitioner's Docket No. IN-5554/BC1-0027)

Applicants greatly appreciate the detailed basis of rejection but must respectfully disagree in regards to the inventions of amended independent claim 21 and independent claim 42.

Applicants' claims 21 and 42 relate to a curable composition comprising a particular curable reaction product

In contrast, the composition of the '715 reference fails to disclose a curable composition comprising a curable polymerized reaction product of a positionally isomeric diethyloctanediol monomer. Rather, it discloses a composition wherein the diethyloctane diol or its EO or PO derivative is crosslinked with the 30 carbon reactive compound upon radiation curing. Thus, the composition only comprises a reaction product of diethyloctanediol monomer after the composition is cured. As such, the '715 reference fails to disclose a curable composition comprising a **curable** polymerized reaction product of a positionally isomeric diethyloctanediol monomer.

To constitute anticipation, all material elements of a claim must be found in one prior art source. *In re Marshall*, 198 U.S.P.Q. 344 (C.C.P.A. 1978). DE '715 fails to meet this standard.

For example, the English abstract of the cited reference indicates that the claimed reactive thinner results from the reaction of three components, i.e., 2,4-diethyloctane-1,5-diol or its derivatives; ethylene oxide or propylene oxide; and a reactive compound having up to 30 carbon atoms and an ethylenically unsaturated polymerizable group. The Examples on pages 4 and 5 of the German language patent DE 198 26 715 A1 appear to indicate that the disclosed reactive thinner is 2,4-diethyloctanediol-1,5-diacrylate (DEODDA). This molecule appears to contain only one unit resulting from a positional isomer of diethyloctanediol.

Thus, DE '715 fails to anticipate the invention of Applicants' amended independent claim 21 because it appears that the claimed reactive thinner of DE '715 lacks two or more repeating units derived from a positionally isomeric diethyloctanediol monomer.

(Practitioner's Docket No. IN-5554/BC1-0027)

Reconsideration and removal of the rejection is therefore respectfully requested in view of the foregoing amendments and remarks.

In response, the PTO states:

Despite applicants' arguments, the abstract clearly discloses the curing of a polymerizable composition comprising the compound derived from 2, 4-diethyloctane-1, 5-diol, and the position is taken that the resulting polymer satisfies the "two or more monomer units" limitation. Despite applicants' remarks, the reference allows for polymerizing the argued diethyloctanediol derivative; therefore, the resulting polymer contains the argued monomer units. As aforementioned, without further definition, no definitive meaning can be ascribed to the "curable" language of the claims that justifies removal of the prior art rejection. Since applicants have failed to clearly define what is meant or encompassed by the language, it cannot be determined if the language patentably distinguishes the instant claims from the prior art.

(Office Action of December 5, 2005, page 5)

The PTO appears to be relying on the term 'and its derivatives'. However, nothing in the PTO's comments or the cited reference indicates that these 'derivatives' result from the polymerization of two or more monomers of diethyloctane diol.

Rather, the term 'derivative' as used in the cited reference could denote a reaction product resulting from the reaction of diethyloctane diol with something other than itself, i.e., **another** compound or monomer.

Moreover, as indicated above, Applicants' amended claims relate to a curable or crosslinkable composition that requires a polymerized reaction product that contains at least two repeating units of a positionally isomeric diethyloctanediol monomer. The reactive thinner of the '715 reference fails to satisfy this aspect of the claimed invention.

Accordingly, reconsideration and removal of the rejection is respectfully requested.

(Practitioner's Docket No. IN-5554/BC1-0027)

7. **Rejection of claims 21 and 27-31 under 35 U.S.C. 102(b) as being anticipated by GB 778924, hereafter "'924".**

The rejection of the pending claims as anticipated by the '924 reference has been maintained and made final. The PTO states:

"The reference discloses polymeric compounds produced from 3,6-diethyl-1,8-octanediol. See page 4, lines 55 and 75-85. The position is taken that the skilled artisan would immediately envisage the use of the saturated diethyloctanediol within the disclosed polymers at page 4, lines 83-85. Furthermore, the position is taken in view of a polymer's definition requiring repeating units that the disclosed polymers inherently satisfy the argued "two or more monomer units" language."

(Office Action of 6/20/05, page 4)

Applicants greatly appreciate the detailed basis of rejection but must respectfully continue to disagree in regards to the invention of amended independent claim 21.

A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference. *In re Paulsen*, 31 U.S.P.Q.2d 1671 (Fed Cir. 1994).

In this case, the invention of amended independent claim 21 requires a curable reaction product comprising two or more repeating units derived from a positionally isomeric diethyloctanediol and having a molecular weight polydispersity Mw/Mn of from 1.1 to 20.

GB '924 is silent as to the need to have a specific reaction product having at least two repeating units derived from a positionally isomeric diethyloctanediol and a specific polydispersity.

Moreover, it is respectfully submitted that the disclosure on page 4, lines 75-84 is not entirely clear. For example, it is not clear which glycol products are meant to be useful in the synthesis of drying oil types of polyesters. It is noted that most of the 'glycol products' disclosed in GB '924 are outside the scope of Applicants' claimed invention, including all products within the scope of the

(Practitioner's Docket No. IN-5554/BC1-0027)

formula set forth on page 1 and claim 1 of GB '924, given that R₄ must be an alkenyl. Indeed, the sentence at lines 79-84 appears to indicate that only nonhydrogenated glycols are intended to be used in the synthesis of 'drying oil' types of polyesters, i.e., see lines 53-58. Such nonhydrogenated glycols do not appear to encompass Applicants' positionally isomeric diethyloctanediols.

As a result, it is respectfully submitted that GB '924 fails to anticipate the invention of Applicants' amended independent claim 21.

In response, the PTO states:

the position is taken that the skilled artisan would immediately envisage the use of the saturated diethyloctanediol within the disclosed polymers at page 4, lines 75-85. Furthermore, the position is taken in view of a polymer's definition requiring repeating units that the disclosed polymers ***inherently satisfy*** the argued "two or more monomer units" language. With respect to applicants' arguments, to the extent that the meaning of "curable" is understood, the position is taken that the disclosed "drying oils" satisfy applicants' requirement that the composition be "curable" and contain the argued units. Furthermore, aside from the aforementioned position, the position is taken that "curable" has not been adequately defined, so as to be able to concretely determine exactly what limitations are conveyed by the language. In the absence of further definition, the presence of the language does not justify removal of the rejection.

(Office Action of December 5, 2005, pages 5 and 6, emphasis added.)

Applicants appreciate the detailed remarks but must respectfully continue to disagree.

In particular, Applicants question the basis for the PTO's position that the cited reference inherently anticipates the invention of claims 21 and 42.

To support an anticipation rejection based on inherency, an examiner must provide factual and technical grounds establishing that the inherent feature necessarily flows from the teachings of the prior art. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'f 1990). An element is inherently

(Practitioner's Docket No. IN-5554/BC1-0027)

present when it is not specifically found in the prior device but is always present or flows naturally from what is taught there. *Levi Strauss & Co. v. Golden Trade*, 1995 WL710822*17 (S.D. N.Y. 1995).

This standard has not been met with the instant rejection. In particular, nothing except the teachings of Applicants' claimed invention suggest the particular elements required by the claimed inventions. Most importantly, Applicants' claimed invention does not always or necessarily flow from the disclosures of the cited reference. Moreover, the single source must disclose all of the claimed elements 'arranged as in the claim'. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

"It is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference. *Ex Parte Levy*, 17 U.S.P.Q.2d 1461 (Bd. Pat. App. & Int'f 1990). Until this standard is met, the cited reference fails to anticipate the claimed invention.

Reconsideration and removal of the rejection is respectfully requested.

8. **Rejection of claims 21, 23, 25-37, 42 and 43 under 35 U.S.C. 102(a) as being anticipated by Bartol, EP 940459, hereafter "Bartol" or "459".**

The rejection of the pending claims as anticipated by Ott has been maintained and made final.

The Undersigned notes that Applicants' foreign priority date renders the instant rejection moot. The PTO's acknowledgement of the receipt of the certified copies of the priority documents is appreciated.

A copy of the translation of the certified priority document is being submitted under separate cover per MPEP 201.15 and 37 CFR 1.55 (a) (4). It is expected that upon the filing of the translation, Applicants will be entitled to rely upon the priority date to overcome the cited reference.

Applicants' regret the inadvertent delay in making this submission.

(Practitioner's Docket No. IN-5554/BC1-0027)

9. Rejection of claims 21-39 under 35 U.S.C. §103(a) as unpatentable over Ott et al., (WO 00/15725), hereafter "Ott" or "'725", or DE 19826715 , hereafter "DE '715", or National Distillers Products Corporation (GB 778924) hereafter "National Distillers" or "GB '924", or Bartol et al., (EP 0940459 (A2,A3)), hereafter "Bartol" or "EP '459".

It is the PTO's position that it would have been obvious to utilize any isomer of diethyloctanediol in the production of polymers, based upon a teaching of the individually cited references.

Applicants appreciate the detailed basis of rejection but must respectfully disagree.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

This standard is not met with any of the above individually cited references.

Most particularly, Applicants must respectfully submit that the inventions of claims 21 and 42 require more than a suggestion to use a diethyloctane monomer in the production of polymers. Rather, as noted above, Applicants' claimed invention centers on a curable composition that contains a curable polymerized reaction product of a positionally isomeric diethyloctanediol monomer, i.e., a polymerized reaction product being one containing two or more monomer units.

Thus, the fact that a diethyloctane monomer was polymerized as a result of the *curing* of prior art coating compositions is irrelevant in regards to patentability of the instantly claimed compositions. That is, such cured compositions fail to disclose or suggest Applicants' claimed curable composition

(Practitioner's Docket No. IN-5554/BC1-0027)

comprising a curable reaction product comprising two or more monomer units of diethyloctane monomer.

Indeed, as previously noted, the crucial factor is what effect such obviousness of structure has upon the obviousness of the subject matter as a whole, since structural obviousness alone is not a bar under 35 U.S.C. §103 to the grant of a patent on a chemical compound. *Comr. Pats. v. Deutsche Gold-und-Silber, etc.* 157 U.S.P.Q. 549 (C.A.D.C. 1968). In this case, the prior art compositions fail to disclose a curable composition that relies upon a *curable* reaction product of diethyloctanediol monomer.

A prima facie case of obviousness based on structure exists if the prior art suggests to one of ordinary skill in the art to make the substitution or modification. *In re Taborsky*, 183 U.S.P.Q. 50 (C.C.P.A. 1974).

In addition, as noted above, each of the cited references fails to disclose Applicants' requirement of a reaction product comprising two or more repeating units. No additional references have been cited by the PTO to correct these identified deficiencies. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (C.C.P.A. 1974); MPEP 1243.03.

Finally, nothing in any of the individually cited references provides the motivation to require Applicants' specific reaction product having a particular polydispersity. The prior art must provide one of ordinary skill in the art the motivation to make the proposed molecular modifications needed to arrive at the claimed compound. *In re Lalu*, 223 U.S.P.Q. 1257 (Fed. Cir. 1984).

In the absence of any motivation to do what Applicants have done, it is respectfully submitted that each of the individually cited references fails to provide a prima facie case of obviousness.

Reconsideration and removal of the rejections is respectfully requested.

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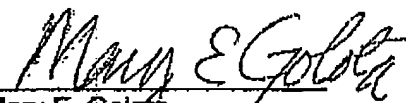
page 2

(Practitioner's Docket No. IN-5554/BC1-0027)

CONCLUSION

Applicant(s) respectfully submit that the Application and pending claims are patentable in view of the foregoing amendments and/or remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,


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Monday, February 06, 2006
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